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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/648,729	08/22/2003	Niclas Karlsson	CMFL/008	4716

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EXAMINER

GREENE, JASON M

ART UNIT	PAPER NUMBER
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1724

DATE MAILED: 10/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/648,729

Applicant(s)

KARLSSON, NICLAS

Examiner

Jason M. Greene

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 12-14, 16-24 and 28 is/are rejected.
- 7) ☒ Claim(s) 10, 11, 15 and 25-27 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

Response to Arguments

1. Applicant's arguments, see page 8, line 14 to page 13, line 26, filed 3 August 2005, with respect to the rejection(s) of claim(s) 1-9, 12-24 and 28 under 35 USC 102 and 103 have been fully considered and are persuasive. Therefore, the rejections have been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Holzmann et al.

Claims

2. Claim 1 recites the phrase "the second seal member in" in line 7. However, the claim does not previously recite the filter assembly having a second seal member. The Examiner notes that the second seal member has been interpreted as being the second seal element. If this interpretation is correct, the Examiner suggests Applicants amend the claim accordingly to clarify antecedent basis.

3. Claims 10 and 11 recite the limitation "the seal feature" in line 1. However, the claims, and claim 8 from which the claims depend, do not previously recite the filter

assembly having a seal feature. It appears as though claims 10 and 11 were intended to depend from claim 9, which recites a seal feature. Accordingly, claims 10 and 11 have been treated as though they were dependent from claim 9 for examination purposes. If this treatment is correct, the examiner suggests Applicants amend the claim dependency accordingly.

Claim Rejections - 35 USC § 102

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
5. Claims 1-9, 12-14, 16-19 and 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Holzmann et al.

With regard to claims 1 and 5, Holzmann et al. discloses a filter assembly (12) comprising a frame assembly (24,26), a filter media pack (16) disposed in the frame assembly, a first compressible seal element (118) disposed on a first side of an edge of the media pack and engaged with the frame assembly, and a second compressible seal element (130) disposed on a second side of an edge of the media pack and engaged with the frame assembly, the second seal element biasing the edge of the media pack against the first seal element in Fig. 9 and col. 1, line 63 to col. 4, line 22.

With regard to claims 2 and 3, Holzmann et al. discloses the media pack (16) being pleated, wherein the first and second seal elements compress a pleated edge of the filter media pack in Figs. 1 and 9.

With regard to claim 4, Holzmann et al. discloses the first seal element having a serrated edge disposed against the media pack in Figs. 1 and 9 and col. 2, lines 27-37. Specifically, since the seal members are injected molded to conform to the shape of the media pack, the first seal element will have a serrated edge conforming to the pleated media pack on the sides orthogonal to the direction of pleating.

With regard to claims 6-8, Holzmann et al. discloses the seal elements being a foamed plastic elastomer (e.g. santoprene) in col. 2, lines 27-37.

With regard to claim 9, Holzmann et al. discloses the seal elements having an edge disposed against the filter media pack (16), and at least one seal feature (the injection molded edge conforming to the shape of media pack) disposed on the edge in Fig. 9 and col. 2, lines 27-37.

With regard to claim 12, Holzmann et al. discloses the filter assembly further comprising third and fourth seal elements (seal elements 118 and 130 on the opposite side of the media pack) clamping an edge of the filter media pack opposite an edge clamped by the first and second seal elements in Figs. 1 and 9.

With regard to claims 13 and 14, Holzmann et al. discloses the filter assembly further comprising an adhesive (the injection molded foamed plastic elastomer potting material forming seal elements 118 and 130) sealing an edge of the media pack adjacent the edge of the media pack proximate the first seal element in Figs. 1 and 9 and col. 2, lines 27-37.

With regard to claims 16-19, Holzmann et al. discloses the frame assembly (24,26) biasing the first and second seal elements toward one another, wherein the frame assembly comprises an upstream portion (24) and a downstream portion (26) coupled to the upstream portion thereby sandwiching the first seal element and the second seal element and the media pack (16) therebetween, wherein the first seal element is biased against the media pack in a direction parallel to an air flow direction (14) through the media pack, and wherein at least one of the seal elements (13) is biased against a side (80) of the frame assembly (as the seal element 130 is compressed by frame portion 26) in Figs. 1 and 9 and col. 1, line 63 to col. 4, line 22.

With regard to claim 21, Holzmann et al. discloses a filter assembly (12) comprising a frame assembly (24,26) having sides (80,110,122) defining an opening through the frame assembly, each side having at least one inwardly extending flange (112,124), a filter media pack (16) disposed in the opening frame assembly and having opposing first and second open ends and opposing first and second closed ends, a first

pair of seal elements (118,130) disposed in the frame assembly and clamping the first open end of the media pack, and a second pair of seal elements (seal elements 118 and 130 on the opposite side of the media pack) disposed in the frame assembly and clamping the second open end of the media pack, wherein at least one of the first pair of seal elements and at least one of the second pair of seal elements are compressible in Figs. 1 and 9 and col. 1, line 63 to col. 4, line 22.

6. Claims 22-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Holzmann et al.

With regard to claims 22 and 23, Holzmann et al. discloses a method of fabricating a filter comprising placing a filter media pack (16) in at least a first portion (24) of a housing assembly (24,26), and compressing an edge of the filter media pack between a first (118) and a second (130) seal member, wherein at least one of the first and second seal members is compressible, wherein the step of compressing comprises joining a second portion (26) of the housing to the first portion of the housing, wherein the housing urges the first and second seal members toward each other in Figs. 1 and 9 and col. 1, line 63 to col. 4, line 22.

With regard to claim 24, Holzmann et al. discloses placing the first seal member in the housing with a serrated edge facing inward in Figs. 1 and 9 and col. 2, lines 27-37. As noted above, the seal members are injection molded to conform to the pleated

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shape of the media pack on the sides orthogonal to the direction of pleating. Therefore, the step of placing the media pack in the housing also comprises the step of placing a first seal member with a serrated edge facing inward in the housing.

7. Claim 28 is rejected under 35 U.S.C. 102(e) as being anticipated by Holzmann et al.

Holzmann et al. discloses a filter assembly (12) fabricated by the process comprising inserting a pleated filter media pack (16) into a filter frame (24,26), inserting a first seal member (118, formed as an integral part of the filter media pack and inserted simultaneously with the filter media pack) into the filter frame proximate a first open edge of the filter media pack, clamping the first open edge of the filter media pack between the first seal member (118) and a second compressible seal member (130), and clamping a second open edge (opposite the first edge) between a third and fourth seal member (118 and 130 on the opposite side) in Figs. 1 and 9 and col. 1, line 63 to col. 4, line 22.

Claim Rejections - 35 USC § 103

8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

9. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Holzmann et al. in view of Raber.

Holzmann et al. does not disclose a grille being disposed alongside the media pack.

Raber discloses a similar filter assembly comprising a grille (20a) disposed alongside a media pack (11) in Figs 1, 9 and 10 and col. 3, lines 7-20.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the grille of Raber into the filter assembly of Holzmann et al. to provide additional structural rigidity.

Allowable Subject Matter

10. Claims 10, 11, 15 and 25-27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. The following is a statement of reasons for the indication of allowable subject matter:

With regard to claims 10 and 11, Holzmann et al. discloses the seal feature comprising a smooth surface conforming to the shape of the media pack.

The prior art made of record does not teach or fairly suggest the filter assembly of claim 9 wherein the seal feature comprises a rib extending from the edge or a groove formed in the edge.

With regard to claim 15, Holzmann et al. discloses the seal elements circumscribing all 4 sides of the media pack in Figs. 1 and 9.

While Koch discloses disposing high loft material (15, the same material used to form the filter media pack) between the edges of the media pack and the frame assembly to form a seal in Figs. 2-3 and col. 3, lines 4-6, one of ordinary skill in the art would not have had motivation to incorporate the high loft material of Koch into the filter assembly of Holzmann et al. since all sides of the media pack are sealed by the seal elements.

The prior art made of record does not teach or fairly suggest the filter assembly of claim 12 further comprising a high loft material disposed between an edge of the media pack adjacent the edge of the media pack proximate the first seal element and the frame assembly.

With regard to claims 25-27, Holzmann et al. teaches the first and second seal members being integrally formed with the media pack by injection molding. Accordingly, Holzmann et al. teaches the first and second seal member being placed in the housing simultaneously with the media pack.

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The prior art made of record does not teach or fairly suggest the method of claim 24 wherein the first seal is placed in the housing before the media pack or the second seal is placed in the housing after the media pack.

The prior art made of record does not teach or fairly suggest the method of claim 22 wherein the second seal member is inserted into the housing after the housing assembly is assembled around the media pack.

Conclusion


12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason M. Greene whose telephone number is (571) 272-1157. The examiner can normally be reached on Monday - Friday (9:00 AM to 5:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jason M. Greene
Examiner
Art Unit 1724


10/11/05

jmg
October 11, 2005